Nevada 4th Grade Mathematics Example

The average June temperatures in a city for the past 10 years are listed below.

78ºF   79ºF   81ºF   78ºF   80ºF   77ºF   78ºF   79ºF   77ºF   78ºF

A. Using the grid in your Answer Document, make a line plot showing the average June temperatures in the city for the past 10 years. Include a label and key on the line plot.

B. Based on the data, predict the average temperature in the city for the next June. Explain your thinking.

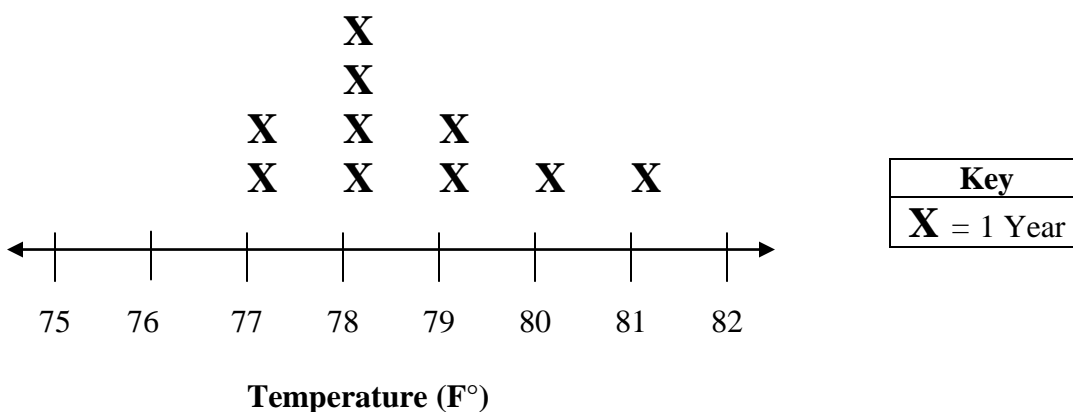| Score	Description
3	Student scores 3 points.
2	Student scores 2 – 2.75 points.
1	Student scores 0.25 – 1.75 points.
0	Student's response provides insufficient evidence of appropriate skills or knowledge to successfully accomplish the task.
Blank	No student response.

Score Points

Part A: score 2.0 points   correct and complete line plot

deduct 0.5 point for each of the following incorrect scale, incorrect or missing temperature plot, incorrect or missing key.

deduct 0.25 point for incorrect or missing label (maximum deduction 2.0 points)

OR
score 0.5 point   shows some understanding of creating a line plot from given data

Part B: score 1.0 point   correct answer with correct and complete explanation (based on answer to **Part A**)

OR
score 0.5 point   correct answer with incomplete or no explanation
OR
vague explanation only

Answer to Nevada 4th Grade Mathematics Example

Correct Answers:

Part A:

Average June Temperatures

```
                X
                X
        X   X   X
        X   X   X   X   X
  ←──┼───┼───┼───┼───┼───┼───┼───┼──→
     75  76  77  78  79  80  81  82
```

Key
X = 1 Year

Temperature (F°)

Part B: Answers will vary. Accept 78°F or 79°F as correct.

Sample answers/explanations:

I predict 78°F as the average temperature for next June because it is the temperature that has occurred the most often in the last 10 years. I know this because on the line plot I created, 78°F is the temperature with the greatest number of **X's** above it. *(Mode)*

Or

I predict 79°F as the average temperature for next June because when I look at the different temperatures that have **X's** above them on the line plot I created (77°F, 78°F, 79°F, 80°F, and 81°F), 79°F is the temperature in the middle. *(Median)*

Or

Some explanation involving the calculation of the mean (78.5° ~ 79°) from the given data.